

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DENNIS L. VENABLE, MICHAEL R. CAMPANELLI, WILLIAM A.  
FUSS, JAMES E. BOLLMAN, TAKASHI NAGAO, TOSHIYA YAMADA,  
and KAZUYA YAMADA

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Appeal No. 1998-1389  
Application No. 08/553,232<sup>1</sup>

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HEARD: May 15, 2000

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Before FLEMING, GROSS, and LEVY, Administrative Patent Judges.  
LEVY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 30-53, which are all of the claims pending in this application.

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<sup>1</sup> Continuation of S.N. 08/133,422, filed October 10, 1993; now U.S. Patent No. 5,485,568.

BACKGROUND

Appellants' invention relates to a structured image format for describing complex color raster images. An understanding of the invention can be derived from a reading of exemplary claim 30, which is reproduced as follows:

30. An electronic image generator, comprising:

a constructing module capable of constructing and displaying a representation, said representation comprising data that can be rendered as a raster and a pasteboard having at least one image attribute, said pasteboard representing a frame onto which said data is rendered, wherein said constructing module is capable of forming and modifying said representation in accordance with the at least one image attribute of said pasteboard; and

a rendering module in communication with said constructing module, the rendering module capable of rendering the representation into a raster.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Smith et al. (Smith)	5,181,162	Jan. 19, 1993
Brotsky et al. (Brotsky)	5,490,246	Feb. 6, 1996

(Effectively filed: Aug. 13, 1991)

Claims 49 and 51 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Brotsky.

Claims 30-48, 50, 52, and 53 stand rejected under 35 U.S.C. § 103 as unpatentable over Brotsky in view of Smith.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the examiner's answer (Paper No. 17, mailed July 17, 1997) for the examiner's complete reasoning

in support of the rejections, and to appellants' brief (Paper No. 16, filed April 25, 1997) and the Response to Request for Additional Information (Paper No. 21, filed May 15, 2000) for the appellants' arguments thereagainst<sup>2</sup>. Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered. See

37 CFR

§ 1.192(a).

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<sup>2</sup> At the Oral hearing, appellants notified the Board that a Request For Certificate Of Correction of the applied Brotsky patent, had recently been filed with the PTO. At the request of the Board, a copy of the Request For Certificate of Correction was provided to us. We note that the Certificate of Correction was issued on January 9, 2001. In addition, at the Oral hearing, the Board requested appellants point out where the limitations of claim 49 are found in the specification. Appellants' response (paper No. 21, filed May 15, 2000) has been considered.

OPINION

In reaching our decision in this appeal, we have carefully considered the subject matter on appeal, the rejections advanced by the examiner, and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer. Upon careful consideration of the record, we reverse each of the rejections set forth by the examiner, and enter a new ground of rejection against claim 37 under 37 CFR § 1.196(b).

We begin with the rejection of claims 49 and 51 under 35 U.S.C. § 102(e) as anticipated by Brotsky. Anticipation is a question of fact. In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. A prior art reference anticipates the subject matter of a claim when the reference

discloses every feature of the claimed invention, either explicitly or inherently. See Hazani v. United States Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Appellants assert (brief, page 4) that Brotsky does not anticipate claim 49 because Brotsky does not teach or suggest "a constructing module capable of constructing and displaying a representation that comprises a field of reference that is selected during the rendering of an image" (emphasis added).

Appellants further assert (id.) that Brotsky does not anticipate claim 51 because Brotsky does not teach or suggest "defining an image processing operation during a pause in the rendering of an image" (emphasis added). According to appellants (brief, paragraph bridging pages 4 and 5), Brotsky can only modify the image representation before or after rendering the image, but not during rendering. Appellants state (id. at page 5) that in Brotsky, rendering an image is performed exclusively during the image viewing stage, which is only performed after the Acyclic graph (ACG) has been constructed, and direct our attention to col. 7, line 50 -

col. 8, line 9 of Brotsky. The examiner responds (answer, page 10) that in Brotsky, the user can select a field of reference to data during the rendering of the representation, and relies on Figures 3 and 5-7 of Brotsky, as well as the statement in Brotsky (col. 8, lines 10-13) that the ACG or source node contents can be modified at any time.

From our review of Brotsky, we find (col. 3, lines 27-54) that a graphics editor generates the ACG. The ACG includes three types of nodes, i.e., source nodes representing image fragments, transform nodes, and sink nodes which are viewable images. The complex image represented by the ACG can be constructed and displayed in a viewer by running the ACG. The ACG is constructed in a graph view window (Figure 2) by selecting node types and creating links or edges between the nodes. When editing a source node, an editor window is displayed (Figure 3) which permits the operator to edit the contents of the source node. Brotsky further discloses (Col. 7, line 50 - col. 8, line 13) that images are created in three stages. The stages are ACG creation and modification, image fragment importation and editing, and image viewing. Once an ACG has been constructed, and its content has been created for

each source node, the ACG can be executed and its results are displayed. Brotsky further discloses (col. 17, lines 20-24) that when an operator inputs an instruction to execute the ACG, a graph traversal algorithm is run, which walks the graph from the leaf nodes to the root nodes. However, the displayed image cannot be viewed directly. The operator must edit and reexecute the ACG (col. 13, lines 55-58). Brotsky additionally discloses (col. 22, lines 3-14) that

FIG. 17 is a flow diagram of the process for executing the image formation process defined by an ACG. In step 1531, an operator inputs an "execute ACG" command. At this time, the structure walker can determine whether the ACG is well formed in step 1532. A well formed ACG is a DAG all of whose ports have at least one edge connected to them and all of whose edges-obey the type restrictions of their ports. If the ACG is not well formed, the user is prompted in step 1533 so that they can edit the ACG prior to reexecution. If the ACG is well formed, operation proceeds to step 1534 where the nodes of the ACG are evaluated from the fringes (leafs) to the roots, as discussed above.

From our review of Brotsky, we find that the disclosure (col. 8, lines 10-11) "[t]he ACG can be modified at any time" refers to any time prior to or subsequent to the execution of the ACG, but not during the execution (rendering) of the ACG. When a "execute ACG" command is inputted (step 1531) the

structure walker determines whether the ACG is well formed (step 1532). However, if the ACG is not found to be well formed, the user is prompted (step 1533) to edit the ACG prior to reexecution. We therefore find that the execution is stopped if the ACG is not well formed. By contrast, we consider the term "paused" to mean that the rendering is continued after the pause has ended. We find the execution of Brotsky to be stopped, and not merely paused, because the execution does not continue after editing is performed in response to the edit prompt (step 1533). Upon editing an ACG so that it is well formed, the execution process does not continue to the next step (step 1534) where the nodes are evaluated. Instead, the user must input another "execute ACG" command (step 1531) and begin the "execute ACG" process from the beginning (step 1531) and have the structure walker once again determine if the ACG has been well formed.

We therefore find that with respect to claim 49, Brotsky does not disclose selecting at least one field of reference during the rendering of the representation. Nor does Brotsky identify an image which is to be defined during the rendering of the representation. With regard to claim 51, we find that



Brotsky does not identify an image which is to be defined during the rendering, pause the rendering, define the image and then complete the rendering. Accordingly, we find that Brotsky does not fully meet the limitations of claims 49 and 51.

Accordingly, the rejection of claims 49 and 51 under 35 U.S.C. § 102(e) is reversed.

We turn next to the rejection of claims 30-48, 50, 52, and 53 under 35 U.S.C. § 103 as unpatentable over Brotsky in view of Smith.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art

as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole. See id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The examiner asserts (answer, page 5) that Brotsky does not disclose an output display window A (pasteboard) which

includes at least one image attribute, wherein the representation is formed and modified in accordance with the image attribute of the pasteboard. To overcome this deficiency in Brotsky, the examiner turns to Smith. The examiner asserts that Smith discloses a document management and production system in which documents are represented as logical components or "objects" that can be physically mapped onto a page-by-page layout. The examiner asserts (answer, pages 5-6) that Figure 4 of Smith teaches a pasteboard with a frame 36 that includes layout document components and their corresponding attributes. According to the examiner, the representation is formed and modified in accordance with the pasteboard image attributes. The examiner's position (id.) is that it would have been obvious "to include the 'page objects' of Smith into the invention of Brotsky because it allows one to create an image or a plurality of layout images that is 'layout driven'."

Appellants assert (answer, pages 7 and 8) that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention without a teaching, suggestion, or motivation to support the

combination, citing ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Appellants note (brief, pages 8 and 9) that Brotsky is directed to a graphics editor that uses an ACG for a user interface. The interface separates the nodes according to their function. This permits the graphic image to be constructed in a straightforward manner that is easily understood and manipulated by a user, and prevents confusion between the effects of the individual nodes on the output image. Appellants take the position (brief, page 8) that to modify the viewer window of Brotsky by incorporating the layout image attributes of Smith would destroy the intended purpose of the graphics editor of Brotsky, and (brief, page 10) would be impermissible hindsight. Appellants assert (brief, pages 10 and 11) that the field of appellants' endeavor is image composition. According to appellants, Smith is directed to a document management and production system that is concerned with the layout of objects within a document, such as a newspaper. Smith "does not teach editing, constructing, or manipulating images in any way." Therefore,

appellants conclude, Smith is not in the field of image composition.

At the outset, we make reference to our findings, supra, with respect to the teachings of Brotsky. We additionally find that in Brotsky, (col. 12, lines 49-62) the ACG is a "single mechanism" that provides a user interface and an implementation model. The user interface presents a simple "erector set" view of images. Brotsky further discloses (col. 9, lines 60-66) that to construct an ACG in the graph view window (Figure 2), commands are issued, e.g., by mouse clicks to indicate where the nodes are desired. Commands, such as dragging a cursor between two nodes can form an edge between the two nodes. After the ACG is constructed, it is executed and the output is displayed in the viewer window. However, the viewer window cannot be directly edited (col. 13, lines 53-57). Additionally, we find (col. 7, lines 27 and 28) that the viewer window labeled "Viewer A" (Figure 2) corresponds to the sink node A in the ACG (Figure 2). From the teachings of Brotsky, we find that the ACG is constructed in a single mechanism, and is subsequently displayed in a passive viewer window.

We find that Smith is directed to (col. 1, lines 6-10) a document management system for creating, distributing, producing and managing various types of multi-component documents. Smith utilizes (col. 1, lines 60-65 and col. 2, lines 54-63) an object- oriented approach wherein data is stored in self-contained programmatic structures that also contain procedures for manipulating the data. A document is decomposed into logical components which are stored as discrete objects that are accessed, organized, and manipulated through a database management system (DBMS). The objects are assembled into an integrated whole when the document is to be printed or displayed. In addition (col. 3, lines 36-45), objects are broadly classified as logical and layout objects. A logical object defines the relationship between different portions of content. Layout objects specify the distribution of content within the logical object, and define physical locations on a page or within a document. The physical structures to which layout objects correspond are shown in Figure 4 (col. 15, lines 24-30). Layout objects may include pages 32, frame 36, blocks 38, and content 40. Logical objects can contain attributes specifying locational

preferences within the document, but these attributes are not evaluated until logical objects are mapped into layout objects during pagination (col. 4, lines 5-9 and col. 15, lines 30-32). Documents may be content-driven such as an office letter, or may be layout-driven such as in a catalogue (col. 5, lines 34-45). Smith further discloses (col. 6, lines 50-54) that the invention simultaneously accommodates both content driven and layout driven strategies of document creation. This is accomplished by maintaining a computational distinction between logical and layout objects. Logical objects remain separate from layout objects until mapped thereon by the document manager 16 (col. 6, lines 61-62). To construct a content-driven document, the user inputs content and attributes through application program 21. Next, the user enters layout parameters into the layout objects. Document manager 16 then generates the final layout parameters based on user input, the logical objects, and the amount of content (col. 7, lines 11-28). The paginated document is then sent to input/output system 23 for conversion to a text stream for conversion to a viewing device (col. 7, lines 34-38). To construct a layout-driven document, (col. 7, lines 41-61) the

user enters precise values for the layout objects, to define a physical structure into which content may be loaded. The structure is displayed to the user prior to entry of content. After the format has been determined (col. 7, lines 51-54), "the user could enter text directly into the allowed layout spaces, lengthening, shortening or altering the fonts as necessary to accommodate the layout." As complex documents such as newspapers are both content-driven and layout-driven, additional software support mediates the elaborate relationship among size, content attributes and layout objects.

In operation (col. 15, lines 19-22), the system initially loads a default set of objects with associated sets of default attributes. These objects and attributes may be altered, and new ones created, by user command. Smith further discloses (col. 8, line 64 - col. 9, line 24) an image subsystem utility program to facilitate input of image data as an object and user manipulation of the entered image. Editing functions permit the user to modify the position, color, and density of the image pixel values. An image processing system permits point manipulation, rotation, cropping, scaling, and color



modification of an image component or the entire image. Input/output system 23 retrieves the final image rendition, translates the data and associated image attributes into display data, and transmits the output to the selected output device.

In view of the teachings of Smith that the image subsystem utility permits the user to modify image color, density, scaling, etc., we do not agree with appellants (brief, page 11) that Smith "does not teach editing, constructing or manipulating images in any way." Additionally, from the teachings of Smith that the invention relates to creating multicomponent documents, and includes an image subsystem utility, we find that the document management system of Smith is analogous art. However, from our review of Brotsky and Smith, we agree with appellants (brief, pages 6, 7, and 10) that the combined teachings of Brotsky and Smith would not have suggested the claimed combination, in the absence of appellants' disclosure. We find that because Brotsky uses an "erector set" view of images, and specifies all of the source and transform nodes, with associated attributes, in the Graph View window, we find no reason, and

no persuasive reason has been advanced by the examiner, to have provided the output sink node (output viewable image) or passive viewer window (Figure 2) with image attributes that are capable of forming the representation, as advanced by the examiner. The examiner asserts (answer, page 6) that the proposed modification "allows one to create an image or plurality of images that are layout driven." In Smith, the document production system is either content-driven, layout-driven, or both. As stated, supra, in Smith's description of a layout driven document, Smith discloses (col. 7, lines 50-54) that "[w]hen the format has been satisfactorily determined, the user could enter text directly into the allowed layout spaces, lengthening, shortening or altering the fonts as necessary to accomodate the layout." From this teaching of Smith, we find that the user is inputting both the content and the attributes of the content into the allowed layout space. From this teaching of Smith, we infer that if an image were to be added to the allotted layout space, the user would also be setting the attributes for the image, such as color, density, cropping, rotation, etc. Thus, in our view, the user is setting both content and attributes for the

allotted layout space, and the attributes within the allotted layout space are attributes of the object being entered by the user, and not the attributes of the pasteboard<sup>3</sup>. However, even if the pasteboard of Smith provides at least one image attribute of the pasteboard for forming the representation, we still find no suggestion to have provided Brotsky's pasteboard (output sink node or passive viewer window) with at least one image attribute to modify the representation, because Brotsky has no reason to override the attributes of the source and transform nodes developed in the ACG. We find no suggestion in the different approaches of Brotsky and Smith that would have lead a skilled artisan to have modified the output sink node or passive viewer window with image attributes. We therefore conclude that the examiner has failed to establish a prima facie case of obviousness with respect to claims 30-48, 50, 52, and 53. Accordingly, the rejection of claims 30-48, 50, 52, and 53 under 35 U.S.C. § 103 is reversed.

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<sup>3</sup> At the Oral hearing, appellants' counsel was asked by the Board to explain why Smith does not anticipate claim 30 under 35 U.S.C. § 102(e). Our understanding of counsel's response was that Smith defines content objects and layout objects, which together are fully formed into an image. The pasteboard of Smith has separate attributes for each of the content and layout objects, with no separate pasteboard for each, and therefore, there is no overriding according to pasteboard attributes.

NEW GROUND OF REJECTION UNDER 37 CFR 1.196(b)

Claim 37 is rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Claim 37 includes the language "wherein said constructing module and said rendering module are capable of constructing and rendering said representation to maintain its appearance independent of resolution and size of the displayed and printed image." We find the language to be indefinite because the term "representation" refers to the data that can be rendered as a raster, and a pasteboard having at least one image attribute. The appearance of the representation, after the representation has been rendered, is the displayed and printed image. It appears that appellants may have been referring to the representation of a component image in a component pasteboard, which will maintain its appearance independent of the resolution and size of the displayed image. In any event, claim 37 as drafted is unclear, and its metes and bounds cannot be readily obtained.

CONCLUSION

To summarize, the decision of the examiner to reject claims 49 and 51 under 35 U.S.C. § 102(e) is reversed. The rejection of claims 30-48, 50, 52, and 52 under 35 U.S.C. § 103 is reversed. A new ground of rejection of claim 37 has been entered under 37 CFR § 1.196(b).

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)).

37 CFR

§ 1.196(b) provides that, "A new ground of rejection shall not be

considered final for purposes of judicial review." 37 CFR § 1.196(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED - 37 CFR § 1.196(b)

	MICHAEL R. FLEMING	)	
	Administrative Patent Judge	)	
		)	
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		)	BOARD OF
		)	PATENT
	ANITA PELLMAN GROSS	)	
APPEALS			
	Administrative Patent Judge	)	AND
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INTERFERENCES			
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		)	
	STUART S. LEVY	)	
	Administrative Patent Judge	)	

Appeal No. 1998-1389  
Application No. 08/553232

Page 24

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APPEAL NO. 1998-1389 - JUDGE

APPLICATION NO. 08/553232

APJ LEVY

APJ GROSS

APJ FLEMING

DECISION: **REVERSED** - 37 CFR § 1.196(b).

Prepared By: GLORIA HENDERSON

**DRAFT TYPED:** 08 Feb 02

**FINAL TYPED:**